

National Priorities List Site

Hazardous waste site listed under the
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA "Superfund")

DAYCO CORP./L.E. CARPENTER CO.
Wharton Borough, New Jersey

Dayco Corp./L.E. Carpenter Co. manufactures vinyl-coated wall coverings on a site of about 2 acres in Wharton Borough, Morris County, New Jersey. Prior to 1970, the company disposed of polyvinyl chloride sludge by burying it in drums. In January 1982, Dayco Corp./L.E. Carpenter Co. and the State entered into an Administrative Consent Order requiring the company to remove the sludge, study ground water contamination, and decontaminate ground water. Later in the year, the company removed approximately 4,000 cubic yards of sludge and soil in the rear of the property. In 1983, a private engineering firm hired by the company studied ground water and prepared a proposal to decontaminate it. The firm estimated that approximately 20,000 gallons of recoverable solvents are floating on the ground water beneath the site. Additional investigations are underway.

The facility is located in the floodplain of the Rockaway River, a recharge area for the unconsolidated Quaternary Aquifer, which is designated a sole source of drinking water for the Rockaway River Basin area. Dover Township wells and Wharton Borough wells serving 27,000 people are within 3 miles of the plant.



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FEB 06 1985

Facility name: Dayco Corporation / L.E. Carpenter

Location: Wharton Borough Morris County NJ

EPA Region: II

Person(s) in charge of the facility: _____

Name of Reviewer: _____ Date: _____

General description of the facility:
(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Dayco Corporation / L.E. Carpenter Company
operates a well covered manufacturing facility
in the borough of Wharton, Morris County, New Jersey.
The facility is located in the flood plain of the Rockaway
River. Prior to 1970, solid and liquid wastes were
disposed in a subsurface impoundment within 200
feet of the Rockaway River. L.E. Carpenter reported to the

Scores: $S_M = 48.12$ ($S_{GW} = 82.89$ $S_{SW} = 7.72$ $S_a = 0$)

$S_{FE} =$

$S_{DC} =$

FIGURE 1
HRS COVER SHEET

NTDEP that it removed 3500 cubic yards of sludge and soil from the impoundment. However, the groundwater is contaminated with xylene and ethylbenzene. An engineering firm hired by the company stated that approximately 20,000 gallons of recoverable solvent is floating on the groundwater.

See Russell
January 25, 1985

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 <u>45</u>	1	<u>45</u>	45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2		6		
Net Precipitation	0 1 2 3	1		3		
Permeability of the Unsaturated Zone	0 1 2 3	1		3		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score				15		
3 Containment	0 1 2 3	1		3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 <u>18</u>	1	<u>18</u>	18		
Hazardous Waste Quantity	0 1 2 3 4 5 <u>6</u> 7 8	1	<u>6</u>	8		
Total Waste Characteristics Score			<u>24</u>	28		
5 Targets					3.5	
Ground Water Use	0 1 2 <u>3</u>	3	<u>9</u>	9		
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 <u>35</u> 40	1	<u>35</u>	40		
Total Targets Score			<u>44</u>	49		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			<u>47</u> <u>520</u>	57.330		
7 Divide line 6 by 57.330 and multiply by 100			$S_{gw} = 82.89$			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Sue Russell
January 25, 1985

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1	0	45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	0 1 2 3	1	1	3		
1-yr. 24-hr. Rainfall	0 1 2 3	1	2	3		
Distance to Nearest Surface Water	0 1 2 3	2	6	6		
Physical State	0 1 2 3	1	3	3		
Total Route Characteristics Score			12	15		
3 Containment	0 1 2 3	1	3	3	4.3	
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1	18	18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	5	8		
Total Waste Characteristics Score			23	26		
5 Targets					4.5	
Surface Water Use	0 1 2 3	3	6	9		
Distance to a Sensitive Environment	0 1 2 3	2	0	6		
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40		
Total Targets Score			6	55		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			4968	64,350		
7 Divide line 6 by 64,350 and multiply by 100			S _{SW} = 7.72			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Sue Russell
January 25, 1985

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	9 45	1	0	45	5.1	
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the $S_a = 0$. Enter on line 5 . If line 1 is 45, then proceed to line 2 .						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score				39		
4 Multiply 1 x 2 x 3				35,100		
5 Divide line 4 by 35,100 and multiply by 100				$S_a = 0$		

FIGURE 9
AIR ROUTE WORK SHEET

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January 25, 1985

	s	s ²
Groundwater Route Score (S _{gw})	82.89	6870.75
Surface Water Route Score (S _{sw})	7.72	59.60
Air Route Score (S _a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		6930.35
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		83.25
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		48.12

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Sue Russell
January 25, 1985

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)
1 Containment	1	3	1		3	7.1
2 Waste Characteristics						7.2
Direct Evidence	0	3	1		3	
Ignitability	0	1 2 3	1		3	
Reactivity	0	1 2 3	1		3	
Incompatibility	0	1 2 3	1		3	
Hazardous Waste Quantity	0	1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score					20	
3 Targets						7.3
Distance to Nearest Population	0	1 2 3 4 5	1		5	
Distance to Nearest Building	0	1 2 3	1		3	
Distance to Sensitive Environment	0	1 2 3	1		3	
Land Use	0	1 2 3	1		3	
Population Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Total Targets Score					24	
4 Multiply 1 x 2 x 3					1,440	
5 Divide line 4 by 1,440 and multiply by 100				SFE =		

**FIGURE 11
FIRE AND EXPLOSION WORK SHEET**

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	0	45	1		45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2						
2 Accessibility	0	1 2 3	1		3	8.2
3 Containment	0	15	1		15	8.3
4 Waste Characteristics Toxicity	0	1 2 3	5		15	8.4
5 Targets						8.5
Population Within a 1-Mile Radius	0	1 2 3 4 5	4		20	
Distance to a Critical Habitat	0	1 2 3	4		12	
Total Targets Score					32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5					21,600	
7 Divide line 6 by 21,600 and multiply by 100				SDC =		

FIGURE 12
DIRECT CONTACT WORK SHEET

January 1983

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Dayco Corp./L.E. Carpenter Company

LOCATION: 170 North Main Street, Wharton, Morris County, N. J.
STREET, MUNICIPALITY, COUNTY, NJ

Site Description (for transcription to worksheet)

Dayco Corporation/L.E. Carpenter Company operates a wall cover-
ing manufacturing facility in the borough of Wharton, Morris
County, New Jersey. The facility is located in the flood plain
of the Rockaway River. Prior to 1970, solid and liquid wastes
were disposed in a subsurface impoundment within 200 feet of
the Rockaway River. L.E. Carpenter reported to the NJDEP that
it removed approximately 110,000 ft³ of sludge (4074 yds³)^{and soil} from
the impoundment. However, the groundwater is contaminated with
xylene and ethylbenzene along with other solvents. An engineer-
ing firm hired by the company stated that approximately 20,000
gallons of recoverable solvent is floating on the groundwater.

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (3 maximum):

No chemicals were detected in water samples collected from upgradient well #5. Downgradient wells #1, 2, 3, and 4 were contaminated with Ethylbenzene and xylene.

Rationale for attributing the contaminants to the facility:

Sludge contained lead, butylbenzene, chloroform, toluene, and xylene.

Appendix A. Sludge analysis and Groundwater Analysis
* *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Unconsolidated Quaternary Aquifer

Appendix F and Appendix G

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Depth from the ground surface to the lowest point of waste disposal/storage:

Sue Russell
January 25, 1985

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

(Ref: HRS Users Manual, Figure 5)

Mean annual lake or seasonal evaporation (list months for seasonal):

(Ref: HRS Users Manual, Figure 4)

Net precipitation (subtract the above figures):

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

(Ref: _____)

Permeability associated with soil type:

(Ref: _____)

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

(Ref: _____)

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Lead benzene
Toluene chloroform
butylbenzene nylene

Appendix A

Compound with highest score:

Chloroform Tox = 3
Pers = 3

HRS Manual. Uncontrolled Hazardous Waste
Site Ranking System, A User's Manual
August 1982

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Approximately 20,000 gallons of recoverable solvent is floating on the groundwater beneath the site and 350 cu. yds of sludge - 10 percent of material removed
Appendix C and B

Basis of estimating and/or computing waste quantity:

20,000 gallons ÷ 50 gallons per drum = 400 drums
350 cu. yds. × 4 drums per cu. yd. = 1400 drums
2800 drums

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January 25, 1985

hwq = 6

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Sole source drinking water as designated by EPA.

Appendix G Federal Register

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Wharton Public wells #1 and 2.

Appendix D and U.S.G.S Quad map

Distance to above well or building:

Wharton wells 1 and 2

4000 feet USGS Quad map

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Wharton - 5500

Dover - 22,000

Appendix D and memo from Bill Cramer, geologist NJ DEP

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

27,500 = populations of Wharton and Dover ..

*Sue Russell
January 25, 1985*

SURFACE WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

Rationale for attributing the contaminants to the facility:

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

slope varies from flat to over 6%

Averages to 3 to 5%

Reference - facility map and USGS Quad map

Name/description of nearest downslope surface water:

Rockaway River

USGS Quad map.

Average slope of terrain between facility and above-cited surface water body in percent:

site which has slope averaging between 3 and 5% is immediately adjacent to Rockaway River

facility map and USGS Quad map

Is the facility located either totally or partially in surface water?

During flood conditions, the river submerges the site

*Sue Russell
January 25, 1985*

Is the facility completely surrounded by areas of higher elevation?

no

U.S.G.S. map

1-Year 24-Hour Rainfall in Inches

2.7 inches

HRS Manual

Distance to Nearest Downslope Surface Water

75 feet

Site map

Physical State of Waste

Sludge

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Highly viscous sludge with potentially unsealed impoundment with no freeboard.

Observation by Greg Cunningham - NJDEP and
Method with highest score: Appendix B -

Diking potentially unsealed, and evidence of sludge movement indicates that dike was breached in the past

Appendix C and
Observation by Greg
Cunningham - NJDEP

Sue Russell
January 25, 1985

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

benzene lead
chloroform toluene
xylene

Appendix A - Sludge Analysis

Compound with highest score:

Chloroform TOT=3
Pers=3

HRS Manual

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

350 cubic yards of sludge

(groundwater movement appears to be
away from river. so solvent in wells
not counted)

Basis of estimating and/or computing waste quantity:

3500 cu. yds. of material was removed from
the impoundment area of which 85 to 90 percent
is appeared to be soil.

Appendix B

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Recreational use of Rockaway River

Appendix E
Joe Russell
January 25, 1985

Is there tidal influence?

No

USGS Map

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

N/A

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

N/A

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

0

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January 25, 1985

Computation of land area irrigated by above-cited intake(s) and
conversion to population (1.5 people per acre):

N/A

Total population served:

0

Name/description of nearest of above water bodies:

Rockaway River
USGS Quad

Distance to above-cited intakes, measured in stream miles.

Sue Russell
January 25, 1985

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

NO AIR DATA

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

(Ref: _____)

Most incompatible pair of compounds:

(Ref: _____)